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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,181	04/24/2006	Milan Lampic-Oplander	20496-503	3787
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PROSKAUER ROSE LLP PATENT DEPARTMENT 1585 BROADWAY NEW YORK, NY 10036-8299			EXAMINER YEE, DEBORAH	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 11/20/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/563,181

Applicant(s)

MILIAN LAMPIC-OPLANDER

Examiner

Deborah Yee

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12-30-05</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 1 and 8 to 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. The Sc equation is not clearly defined. It is recommended to add an additional parenthesis such that equation recites ----  $Sc = C\% / (4.26 - 0.3 * (Si\% + P\%))$  -----.
4. Claims 8 to 19 are improper multiple dependent claims. Note a multiple dependent claim cannot depend on another multiple dependent claim. Correction required.
5. The recitation "type of oxide" in claim 19 is indefinite. Note that the addition to the word "type" to an otherwise definite expression is held to be indefinite because it is unclear what "type" was intended to convey. See MPEP 2173.05©.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:  
  
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 to 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over European patent 1004789 (hereinafter EP'789) or European patent 1213071 (hereinafter EP'071) cited by Applicant in IDS dated December 30, 2005 in view of Japanese patent 52-111814, US Patent 6,177,045 (hereinafter Ecob et al.) or Soviet Union patent 1803460 (SU'460) and Derwent publication of NL 150847- English abstract.

8. The abstract of EP'789 or EP'071 discloses a gray cast iron alloy having a composition with constituents whose wt% ranges overlap those recited by the claims; such overlap in wt% ranges establishes a prima facie case of obviousness since it would be obvious for one skilled in the art to select the claimed alloy wt% ranges over the broader disclosure of the prior art because the prior art teaches the same utility (making camshaft).

9. More specifically EP'071 on line 35 on page 7 discloses a cast iron alloy which closely meets the claimed composition except for 0.29% Mn. It would be obvious, however, to increase Mn since a broad Mn range of up to 1.0% is taught. Also when calculated, Sc and MEG equation limitations are met. Similarly, EP'789 in column 1 of the table on pages 3 and 4 discloses a cast iron alloy example that closely meets the claimed composition and when calculated, Sc and MEG equation limitations are met.

10. Even though 0.003 to 0.007% oxygen as recited by the claims is not taught by prior art, such would not be a patentable difference. Note that it is well known in the art to add small amounts of oxygen to grey cast iron to promote high graphitization tendency and high impact toughness, as taught by the English abstract of JP'814. Since

such properties would be desired and sought by EP'789 or EP'071, then it would be an obvious modification well within the skill of the artisan to incorporate small amounts of oxygen to its cast iron alloy to produce no more than the known and expected effects from such an addition.

11. Even though adding a small amount of Sr, Ni, N or Ce as recited by the claims is not taught by prior art, such would not be a patentable difference. Note that it is well known in the art that Sr, Ni, N or Ce are conventionally added to grey cast iron to further enhance mechanical properties, as evident by Ecob et al, SU'460 and NL English abstract; and hence would be a matter of choice and routine optimization well within the skill of the artisan to incorporate to produce no new and unexpected results.

12. The prior art does not teach iron alloy in the cast state containing more than 50% of oxygen in the form of oxide as recited as recited by claim 19 but such oxide formation would be expected since compositional limitations are closely met and in absence of proof to the contrary.

13. The prior art teaches alloying elements that overlap or closely suggest those recited by one or more of the dependent claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00 am-2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah Yee/  
Primary Examiner  
Art Unit 1793

/DY/